

**REMARKS**

The application has been carefully reviewed in light of the Office Action dated March 17, 2006. Claims 14-24 are pending. Claims 1-13 have been canceled without prejudice, waiver, or disclaimer. Claims 14 and 17 have been amended. No new matter is believed to be added by these amendments. In addition, unless a passage of an amendment is specifically discussed below in connection with one or more cited references, Applicants respectfully submit that the amendments to the claims should be construed as being submitted merely to clarify the invention rather than as a limitation submitted to overcome a cited reference.

**Rejection under 35 U.S.C. § 112**

Claims 14-24 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to point out and distinctly claim the subject matter which the Applicant regards as his invention. The Examiner states that, in Claim 14, the phrase “a horizontal vapor outlet comprising a plurality of holes therein the lateral surface” is unclear. Claim 14 has been amended to read “a horizontal vapor outlet defined by a plurality of holes therein the lateral surface.” Applicant believes that this amendment clarifies the meaning of the claim.

The Examiner also states in the Office Action that Claim 17 is indefinite because the phrase “the sealing mechanism” lacks antecedent basis. Claim 17 has been amended to properly depend from Claim 23, providing the proper antecedent basis.

**Rejection under 35 U.S.C. § 103**

Claims 14 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Witzman (U.S. Patent No. 6,202,591) in view of Remondiere (U.S. Patent No. 4,880,960), Nakabayashi (JP 2001-192293), and Baxter (U.S. Patent No. 5,803,976), as well as Roblin (U.S. Patent No. 3,672,327) taken in view of Witzman, Baxter, and Cole (U.S. Patent No.

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3,690,933). One skilled in the art would not have been motivated to modify the cited references to arrive at the claimed invention having an elongate nozzle pipe with a horizontal vapor outlet in its lateral surface and a vaporizer housing a plurality of reflectors which concentrically enclose the nozzle pipe. The nozzle pipes of Fig. 3a of Witzman and in Nakabayashi do not have side opening, but instead have end openings, so that the thermal shield has a closed cross section. Using such a shield for the nozzle pipe of Fig. 14a of Witzman would mean that the nozzle pipe would be closed and inoperable. Thus, a modification of the cited references to include the elements of the present invention would prevent the respective Witzman, Remondiere, Nakabayashi, and Baxter apparatus from being used as designed, which undermines an obviousness rejection. *See In re Fritch*, 972 F.2d 1260, 1265 n.12, 23 U.S.P.Q.2d 1780, 1783 n.12 (Fed. Cir. 1992) (“This court has previously found a proposed modification inappropriate for an obviousness inquiry when the modification rendered the prior art reference inoperable for its intended purpose.”) (citing *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984)); *Schneider (Europe) AG v. Scimed Life Sys., Inc.*, 852 F. Supp. 813 (D. Minn. 1994) (“Where obviousness is based upon a modification of a reference that destroys the intended purpose or function disclosed in a reference, there is no motivation for engaging in the modification.”) (citing *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984)).

In addition, the Office Action fails to establish a *prima facie* case of obviousness of the subject matter of amended Claim 14. Courts have generally recognized that a showing of *prima facie* of obviousness necessitates three requirements: (i) some suggestion or motivation, either in the references themselves or in the knowledge of a person of ordinary skill in the art, to modify the reference or combine the references’ teachings; (ii) a reasonable expectation of success; and (iii) the prior art references must teach or suggest all of the claim limitations. See e.g., *In re Dembiczak*, 175 F. 3d 994 (Fed. Cir. 1999); *In re Rouffet*, 149 F.3d. 1350, 1355 (Fed. Cir. 1998); *Pro-Mold & tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573 (Fed. Cir. 1996).

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The combination of references used in the rejection of Claim 14 fails at least one of the above noted prongs of obviousness. None of the references teach a vaporizer housing comprising “a plurality of exterior cooling pipes extending substantially the elongate length of the nozzle pipe.” Fig. 3a of Witzman, as well as Nakabayashi, has cooling pipes which surround the nozzle pipe and the heat shield like a spiral. A spiral arrangement of the cooling pipes cannot be used with the nozzle pipe as in Fig. 14a of Witzman because the cooling pipes would not only cool the heat shield, but also the opening forming the nozzle, causing the vapor to condense and to deteriorate the deposition rate. Therefore, in addition to not teaching or suggesting all of the claim limitations, such a modification would render the apparatus in Witzman inoperable for its intended purpose, going against the tenets of *In re Fritch*. Further, the construction of the cited references in this manner requires hindsight reasoning, which the Federal Circuit has explicitly rejected. *See In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992) (“Here, the Examiner relied upon hindsight to arrive at the determination of obviousness. It is impermissible to use the claimed invention as an instruction manual or ‘template’ to piece together the teachings of the prior art so that the claimed invention is rendered obvious.”). Likewise, the claims that depend therefrom the respective independent Claim 14 would not be rendered obvious. *See In re Fine*, 5 U.S.P.Q.2d 1569, 1600 (Fed. Cir. 1988) (“Dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.”).

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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A Credit Card Payment in the amount of \$330.00 for Two-Month Request for Extension of Time has been paid herewith. This amount is believed to be correct; however, the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,

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